

1. GHP proposes to install and operate a 7.5 MW (annual average capacity) steam turbine in the existing powerhouse of the paper mill. This turbine can produce up to 9.5 MW of power on an hourly basis. The steam turbine will drive an electrical generator that will supply additional electric power to the facility. Any excess generating capacity may be sold. Steam for the turbine will be supplied from two existing hog fuel boilers.
2. The GHP mill is located in Grays Harbor County in Hoquiam, WA. The mill site is bordered by the Hoquiam River to the west and Grays Harbor to the south. Its Universal Transverse Mercator (UTM) coordinates in meters are Easting 433800, Northing 5202000, Zone 10. Existing components include two paper machines, two hog fuel boilers, and storage facilities for purchased pulp, oil, hog fuel, and paper product. Two steam turbine-driven generators (5 MW and 3 MW) currently supply some of the mill's electrical power requirements.
3. The GHP mill is located within a Class II area that is currently designated in attainment for all national and state air quality standards.
4. Ecology received the GHP PSD permit application on April 14, 2006. The application was determined to be complete on May 12, 2006. Additional information was submitted in a letter dated July 12, 2006.
5. The proposed project consists of installation of a 7.5 MW steam turbine and electrical power generator.
 - 5.1. The steam turbine does not generate any direct emissions.
 - 5.2. The increased steam demand due to the steam turbine will increase combustion related emissions from the two existing hog fuel boilers.
 - 5.3. The project does not require modification of the boilers or any other emission units.

6. Because GHP is an existing major stationary source, any net emissions increase of a regulated pollutant greater than its Significant Emission Rate qualifies the proposed project as a major modification. As a result, the project would be subject to PSD review under WAC 173-400-700 for that pollutant. Additionally, the project is subject to federal PSD review because it qualifies as a major modification under federal rules [40 CFR 52.21(b)(2)(i), 40 CFR 52.21(b)(3)(i), and 40 CFR 52.21(b)(23)(i)].
7. Potential regulated pollutants for the proposed project are shown in Table 1. They are nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), volatile organic carbon compounds (VOC), particulates less than 10 microns in diameter (PM₁₀), and particulates of any diameter (PM).

Table 1: Significant Net Emission Increases as the Result of the Proposed Project

Pollutant	Baseline Actual Emissions ^a	Projected Actual Emissions	Net Emissions Increase	PSD Significant Emission Rate (SER) (tpy)	Trigger PSD?
NO _x	400	524	124	40	Yes
CO	1287	1667	380	100	Yes
SO ₂	56	70	14	40	No
VOC	26	35	8	40	No
PM ₁₀ ^b	434	553	119	15	Yes
PM ^b				25	

- a. The BAE period for NO_x, CO, PM₁₀, and VOC was 2003/2004. For SO₂, it was 1999/2000.
- b. PM₁₀ is the pollutant of concern for this project. Since PM has no NAAQS, increment, or other air quality related values issues, and this permit has no BACT issues, PM is not a true pollutant of concern for this permitting action.

8. Regulated pollutants with net emissions increases greater than their PSD Significant Emission Rate (SER) are subject to regulation under PSD. For this project at GHP, the PSD regulated pollutants are NO_x, CO, and PM₁₀.
9. All emission increases considered in this proposal are due to increased utilization of the two existing hog fuel boilers. The boilers were put into service before the PSD program was established and applicable regulations were in place, so they are “grandfathered” units that are not being modified by the proposed project. EPA policy governs PSD permitting requirements for emissions increases due to increased utilization. An Air Quality Impacts Analysis is required for all PSD applicable pollutants. For impacts that approach any regulatory limit such as a National Ambient Air Quality Standard (NAAQS) or PSD Increment limit, testing, reporting, and emission limits may be given as required to assure that those regulatory standards are not exceeded.
10. The emissions of all air pollutants from GHP are subject to review under Chapter 173-400 WAC, Chapter 173-460 WAC, and the regulations of the Olympic Region Clean Air Agency (ORCAA). Chapter 173-400 WAC includes provision for PSD review (WAC 173-400-700). This permit considers only PSD pollutants that have a significant net emission increase due

to the project when considered under PSD regulations. Since this project does not physically modify an emission unit to increase its hourly emissions capability, no modification to GHP's existing minor NSR permit issued by ORCAA is required for this project.

11. There are no NSPS requirements for the equipment installed by this project. The project does not trigger any additional NSPS requirements for other plant emissions units.
12. No Best Available Control Technology (BACT) determinations are triggered by this project.
13. Less than 10,000 barrels per year of Number 6 fuel oil may be burned by the project.
14. Total steam production from both boilers was modeled at 318,900 lb/hr on a short-term basis and 298,900 lb/hr on an annual basis. Steam production measurement and emission factors are the basis of predicting particulate emission levels.
15. Allowable increases in emissions from affected emission units (the two existing hog fuel boilers) will not cause or contribute to air pollution in violation of:
 - 15.1. Any National Ambient Air Quality Standard (NAAQS). Table 2 shows NO_x and CO impacts are far below their respective NAAQS. PM₁₀ emissions impacts are close enough to the NAAQS (24-hour and annual) for the permitting agency to include additional permit requirements.
 - 15.2. Any PSD increment consumption.
 - 15.3. Any significant visibility impacts.

Table 2: Emissions Impacts on NAAQS

Pollutant	Averaging Period	Project % of SIL	GHP % of NAAQS	Other Sources % of NAAQS	Background % of NAAQS	Total % of NAAQS
NO ₂	Annual	--	4%	1%	22%	26%
CO	1-hour	26%	--	--	--	--
CO	8-hour	44%	--	--	--	--
PM ₁₀	24-hour	--	60% ¹	1%	34% ²	96%
PM ₁₀	Annual	--	23%	1%	52%	77%

¹ Recent testing on Boilers 6 and 8 in August 2006 showed lower PM₁₀ emission rates than the rates used for preparation of this application. This means that PM₁₀ emissions are lower and not as close to the PM₁₀ NAAQS.

² The background PM₁₀ level is conservative (is probably overestimated) because it already includes the contributions of some of the industrial sources modeled (double counts them), and because it is unlikely that the meteorological conditions that produced it also produce the highest modeled source impacts at the same time.

16. The distances to nearest Class I areas are shown in the following table:

Class I Area	Distance to GHP	
	(km)	(miles)
Olympic National Park	54	34
Alpine Lakes Wilderness Area	170	106
Mt. Rainier National Park	140	87
Goat Rocks Wilderness Area	170	106
Mt. Adams Wilderness Area	180	112
Columbia River Gorge National Area ³	180	112

17. Maximum nitrogen deposition within the closest Class I Area (Olympic National Park) is predicted to be less than 50% of the National Park Service (NPS) screening criteria (0.005 kg/ha/yr). The NPS Land Manager determined that emissions impacts from this project were not objectionable, and the USFS Land Manager concurred.

18. No significant effect on industrial, commercial, or residential growth in the area is anticipated as a result of this project.

19. Ecology finds that all requirements for PSD have been satisfied. Approval of the PSD application is granted subject to the following conditions.

APPROVAL CONDITIONS

Fuel Restrictions on Boilers 6 and 8

1. Total annual Number 6 fuel oil consumption is limited to 10,000 barrels per year.

Emission Limits for Boilers 6 and 8

2. Steam production total for both boilers together is limited to:

2.1. 318,900 lb/hr on a 24-hour average.

2.2. 298,900 lb/hr on a 12-month average.

3. PM₁₀ emissions from the wood-waste-fired boilers shall not exceed:

3.1. 78.4 lb/hr on a calendar day basis for Boiler 6.

3.2. 52.5 lb/hr on a calendar day basis for Boiler 8.

3.3. 553 tons per year averaged over 12 consecutive months.

Compliance Monitoring and Testing

4. Monthly usage of Number 6 fuel oil shall be monitored and recorded.

³ The Columbia River Gorge National Scenic Area is not a designated Class I area. At the Federal Land Manager's request, this area is usually included in Class I area assessments.

5. Daily average steam production from Boilers 6 and 8 shall be monitored and recorded.
6. Daily PM₁₀ emissions shall be determined and recorded from production data such as boiler steam production, fuel consumed, and emission factors. GHP shall submit a calculation procedure acceptable to Ecology and ORCAA before startup of the 7.5 MW turbine.
7. PM₁₀ emission rates shall be tested for each boiler within every 36-month period starting when the 7.5 MW turbine is placed into commercial operation. Testing shall alternate between summer and winter seasonal conditions.
 - 7.1.1. Testing shall be done using 40 CFR 60 Appendix A Method 5 or 40 CFR 51 Appendix M Method 201 or 201A for the front half, and 40 CFR 51 Appendix M Method 202 for the back half.
 - 7.1.2. Testing shall be done at a boiler operating rate at least equal to or greater than 90% of the highest daily operating rate within the previous 36 months.
 - 7.1.3. Equivalent test methods may be used if approved in advance by Ecology and ORCAA.

Standard Requirements


8. GHP shall submit semi annual reports to Ecology and ORCAA. Once the conditions from this permit are included in GHP's Title V permit, it will no longer be necessary to send the reports to Ecology. Reporting will then be determined by the Title V reporting format and schedule.
 - 8.1. The reports should include at least:
 - 8.1.1. Number 6 fuel oil usage on a rolling 12-month basis for each month of the reporting period.
 - 8.1.2. The maximum daily steam production rate during the reporting period and the PM₁₀ emissions on that day estimated using calculation procedures derived per Condition 6.
 - 8.1.3. The average steam production rate during the previous two reporting periods (12 months total) and the total PM₁₀ emissions calculation procedures derived per Condition 6.
 - 8.2. All results of performance testing shall be submitted within 30 days of availability.
 - 8.3. All records pertaining to emissions shall be retained for a period of not less than five years.
9. Each occurrence of oil usage, steam production, or PM₁₀ emissions measured in excess of the limits shall be reported in writing to Ecology and ORCAA in accordance with WAC 173-400-107. Such reports shall as a minimum include:
 - 9.1. The time of the occurrence.
 - 9.2. Magnitude of excess from the emission limit.

- 9.3. The duration of the excess.
- 9.4. The probable cause.
- 9.5. Corrective actions taken or planned.
- 9.6. Any agency contacted.
10. Sampling ports and platforms shall be provided on each stack, after any final pollution control device. The ports shall meet the requirements of 40 CFR 60 Appendix A, Method 1. Adequate, permanent, and safe access to the test ports shall be provided.
11. GHP shall notify Ecology and ORCAA in writing at least 30 days prior to initial startup of the 7.5 MW turbine.
12. Within 90 days of startup of the 7.5 MW turbine, GHP shall identify operational parameters and practices that will constitute "proper operational practices" of the wood-waste-fired boiler relative to compliance with the conditions of this permit. These operational parameters and practices shall be included in an O&M manual for the facility. These practices shall include at least the practices used to determine fuel oil consumption, boiler steam production and calculate particulate emissions. The O&M manual shall be maintained and followed by GHP and shall be available for review by Ecology, ORCAA, or EPA. If a failure to follow the requirements of the manuals results in excess emissions that failure may be considered credible evidence that the event was caused by poor or inadequate operation or maintenance for purposes of applying WAC 173-400-107.
13. Access to the source by Ecology, ORCAA, or the EPA, shall be permitted upon request. Failure to allow such access is grounds for an enforcement action under the federal Clean Air Act or the Washington State Clean Air Act.
14. This approval shall become invalid if construction of the project is not commenced within eighteen (18) months after receipt of the final approval, or if construction of the facility is discontinued for a period of eighteen (18) months, unless Ecology extends the 18-month period, pursuant to 40 CFR 52.21(r)(2) and applicable EPA guidance.
15. The effective date of this permit shall not be earlier than the date upon which the EPA notifies Ecology that the EPA has satisfied its obligations, if any, under Section 7 of the Endangered Species Act 16 U.S.C. § 1531 et seq., 50 C.F.R. part 402, subpart B (Consultation Procedures) and Section 305(b)(2) of the Magnuson-Stevens Fishery and Conservation Act 16 U.S.C. § 1801 et seq., 50 C.F.R. part 600, subpart K (EFH Coordination, Consultation, and Recommendations).
16. For federal regulatory purposes and in accordance with 40 CFR 124.15 and 124.19: If there was a public comment requesting a change in the preliminary determination or a proposed permit condition during the public review and comment period, the effective date of this permit shall not be earlier than 30 days after service of notice to the commenters and applicant on the preliminary determination.
 - 16.1. If a review of the final determination is requested under 40 CFR 124.19 within the 30-day period following the date of the final determination, the effective date of the

permit is suspended until such time as the review and any subsequent appeal against the permit are resolved.

- 16.2. If there was no public comment requesting a change in the preliminary determination or a proposed permit condition during the public review and comment period, this permit is effective upon the date of finalization subject to consideration of Condition 15 (EPA's ESA requirement) above.

Reviewed by:



Robert C. Burmark, P.E.
Technical Services Section
Air Quality Program

November 17, 2006

Date



Approved by:



Stuart A. Clark, Program Manager
Air Quality Program
Washington State Department of Ecology

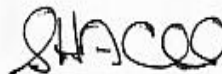
11/17/06

Date

Ecology was notified by the U.S. EPA that the U.S. EPA has satisfied its obligations under the Endangered Species and Magnuson-Stevens Acts relative to PSD Permit 06-01 issued to Grays Harbor Paper, LP on:

May 2, 2006

Date of U.S. EPA Notification



Stuart A. Clark, Program Manager
Air Quality Program
Washington State Department of Ecology